

Algebra

1. Copy and complete to evaluate the following expressions when $a = 3$, $b = 2$ and $c = 1$:

(a) $a + 2b + c$ (b) $b + 3c + 6a$ (c) $7a - 3b - 4c$ (d) $8a - 9c - 3b$

2. Given $p = 3$, $k = 5$ and $h = 2$, evaluate:

(a) $p + 3k + 2h$ (b) $2p + 3k - 2h$ (c) $8p + 7k - 3h$ (d) $8h - 6p - 10k$

3. Given $w = 2$, $x = 3$, $y = 4$ and $z = 6$, evaluate:

(a) $5w^2$ (b) $6z^2 - 7y$ (c) wx^2 (d) $wxy - 5yz$

4. Solve the equations:

(a) $x - 4 = 10$	(b) $z - 9 = 20$	(c) $x - 6 = 17$	(d) $30 - x = 22$
(e) $y + 10 = 50$	(f) $z + 11 = 30$	(g) $6 + p = 23$	(h) $r + 40 = 60$
(i) $x - 6 = 7$	(j) $16 - f = 6$	(k) $y - 56 = 8$	(l) $15 - x = 6$
(m) $6 + z = 11$	(n) $y + 30 = 30$	(o) $15 + m = 25$	(p) $x + 8 = 16$
(q) $76 - y = 21$	(r) $z - 35 = 75$	(s) $42 - m = 13$	(t) $y - 7 = 23$

5. Solve each equation:

(a) $5x = 60$	(b) $4x = 28$	(c) $7x = 35$	(d) $9x = 72$
(e) $6x = 36$	(f) $2x = 10$	(g) $6x = 72$	(h) $5x = 65$
(i) $7x = 77$	(j) $3x = 21$	(k) $9x = 27$	(l) $6x = 42$



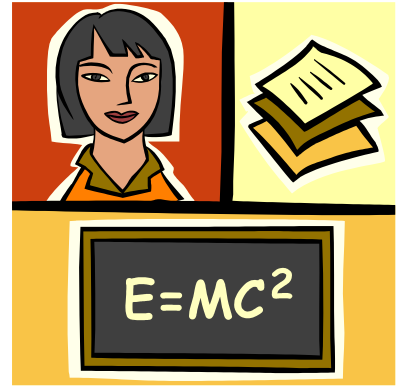
6. Solve the equations.

(a) $3x + 4 = 19$	(b) $2y + 1 = 7$	(c) $6y - 2 = 22$	(d) $3x - 1 = 2$
(e) $3a + 6 = 12$	(f) $4b + 8 = 24$	(g) $6y - 2 = 10$	(h) $10y - 6 = 44$
(i) $9x - 2 = 43$	(j) $5x - 3 = 27$		

7. Solve the equation

(a) $3x + 4 = 18$	(b) $2y + 1 = 6$	(c) $6y - 2 = 21$	(d) $3x - 1 = 1$
(e) $3a + 6 = 13$	(f) $4b + 8 = 25$	(g) $6y - 2 = 11$	(h) $10y - 6 = 45$
(i) $9x - 2 = 44$	(j) $5x - 3 = 28$		

8. (a) When 5 is added to p the answer is 18. Find p .
 (b) When 13 is subtracted from x the answer is 4. Find x .
 (c) When 30 is subtracted from q the answer 16. Find q .
 (d) The **product** of 8 and x is 72. What number is x ?
 (e) The **quotient** of 28 and x is 4. Find x .
 (f) There are n passengers on a bus. 6 get off at a stop.
 If 20 passengers remain on the bus, what number is n ?
 (g) When m is multiplied by itself the answer is 49. Find m .
 (h) The sum of y and 13 is 50. What is the value of y ?



9. Solve these inequations:

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| (a) $x + 9 > 11$ | (b) $4y - 5 > 27$ | (c) $w + 25 < 29$ |
| (d) $10y + 3 > 3$ | (e) $y - 7 > 2$ | (f) $52 < 6z - 2$ |
| (g) $3y + 2 > 38$ | (h) $14x - 12 < 16$ | (i) $3z + 11 > 23$ |
| (j) $2l < 7y + 7$ | (k) $5y - l < 4$ | (l) $10y + 4 > 4$ |
| (m) $3z + 2 > 14$ | (n) $18 > 5z + 8$ | (o) $x + 19 > 11$ |

10. Solve these inequations from the set of numbers $\{ 0, 1, 2, 3, 4, 5, 6 \}$

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|--------------------|---------------------|-------------------|
| (a) $x + 8 > 11$ | (b) $7y - 45 > 25$ | (c) $40 < 6z - 2$ |
| (d) $5y + 2 > 27$ | (e) $12x - 12 < 12$ | (f) $3z + 2 > 24$ |
| (g) $18 > 5z + 28$ | (h) $12 > 6m + 24$ | (i) $13x - 2 < 3$ |

